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NOTES ON A RAILWAY
THROUGH CENTRAL AMERICA

PRESENTED

BY

THE DELEGATION OF COSTA RICA

TO THE

CENTRAL AMERICAN PEACE CONFERENCE

WASHINGTON, D. C.

NOVEMBER

1907

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GENTLEMEN

7 MAY 1906
 We do not think it necessary to state that no matter what resolutions the Conference may adopt in regard to the principal subjects embraced within the scope of the most important mission which our several governments have intrusted to us, one of the main points to be taken into consideration is that of recommending the improvement of both the land and sea communications among the Central American Republics themselves and between these and their neighboring countries and any other States whose relations may foster the development of commerce and other advantages to be derived from the general progress of our respective countries.

The importance of these means of communication, of a railway which will unite all our countries and may contribute through its powerful agency to efface boundary lines and bring our peoples closer and closer together, is not only a want which we all feel, but is a work that can be realized without an effort beyond the means which we are fortunate to have within our reach.

In the Bar. Amer. Rep. C
 The Minister of Costa Rica in Washington has always been of this opinion, and an earnest supporter of the Pan-American Railway project. Upon his return from Mexico, after the Second International Conference, for so many reasons worthy of our recollection, he published a few remarks and data, particularly referring to the share of our countries in that great enterprise, and it was with gratification that we saw that his modest contribution was received with marked favor by the American Press.

Not very long ago, while in search of new data, of a new light which might contribute to the realization of the International Railway project between Mexico and Panama, where the opening of the Isthmian Canal by

the Government of Washington promises to be an event of the near future for the greatest benefit of the whole world, the Minister had the good fortune to receive from Mr. Theodore Paschke, Member of the American Society of Civil Engineers, New York, the accompanying document, which is far above and beyond anything we could ever have written on such an important matter.

The distinguished engineer, Mr. Paschke, has lived for many years in Central America. While in Guatemala he directed part of the work on her railroads and now holds a position of great responsibility with the New York Subway, which shows that he is a most competent man, whose opinions deserve the greatest consideration and prestige.

We must not omit to state that Mr. Paschke has dedicated the work to which we refer to the memory of Don Guillermo Nanne, a German by birth and a Costa Rican at heart not only because of his love for that country, but because his distinguished family was born there. Mr. Nanne is one of those persons whose pleasant personality is forever connected with the memory of the construction of the first railways in Costa Rica and Guatemala.

Mr. Paschke's work is particularly instructive and will no doubt be an excellent contribution to the study of whatever recommendations the Conference may decide to make to our respective governments, and with this end in view, we have the honor to respectfully submit this work to our distinguished colleagues in the hope that the data therein contained might be of service.

LUIS ANDERSON,
J. B. CALVO.

WASHINGTON, D. C.,
November 20, 1907.

THE INTERCONTINENTAL RAILWAY.

By J. B. CALVO.

When we consider the great influence which the means of communication exercise, not only in the development of the natural resources and other fountains of national production, but also in the moral and intellectual advancement which the widening of the sphere of action affords to man, the great benefits that would result to the American Republics from the construction of a continental railroad become evident.

The enterprise is certainly a colossal one, though it does not in reality present any insurmountable obstacles, and in order to become an accomplished fact it only requires that the project should be taken up with a resolute purpose and properly started.

It is evident that the development of local traffic alone would pay, in the immediate future, the cost of the road, and that the increase of the commercial relations between the neighboring countries would be very rapid, promoting in this manner the general, political, and social welfare of all the nations of this continent, as well as securing a closer union among them, all of which would tend to daily increase the value of capital and the profits thereof.

The progress which Mexico has made in the last few years has naturally attracted the attention of the whole world, and the great impulse given to all her industries demands, for that prosperous Republic, easy means of communication with the contiguous States, where excellent markets are to be found for many of her varied products, which competition on the North carries to said

States in the South, as is the case at present, particularly with regard to cotton fabrics and all kinds of leather goods.

It is a fact that the Central American States are constantly progressing; and while the moral advancement is also evidenced by the peaceful condition which they at present enjoy, the development of their manifold and rich sources of production increases daily, thus encouraging new enterprises, the improvement of the existing means of communication, and the construction of other new and important ones.

In the far south, the Argentine Republic rises up as an agricultural rival of the United States of America, while Chile initiates a competition on the Pacific with the steamship companies of the great American nation.

These practical examples of the advancement of the Latin-American countries indicate the activity and progress which they have already reached, and show clearly the great importance of the field which they afford to business and enterprise.

Brazil, with her extensive territory; Uruguay, with her favored geographical position; Peru, Bolivia, Ecuador, Venezuela, and Colombia, by the exuberant richness of their soil, all enjoy, in an equal degree, the benefits of progress and civilization.

Therefore the construction of a railway through all these countries will find abundant elements of support already existing and many others which it will of itself create, either owing to the influence of the facilities for local traffic or as a consequence of rapid communication between the different States.

At the First International Conference held in Washington in 1889-90 resolutions were passed for the purpose of carrying out this great enterprise, and as a practical result of the preliminary steps then taken the proper studies of the matter were made by several corps of engineers, who presented an exhaustive report, which is

printed with maps and illustrations in seven large volumes.

From these studies it appears that the length of a railroad from New York to Buenos Ayres would be 10,471 miles, and that half of this enormous distance is already covered by existing railroad lines.

Referring especially to the first part of this great continental enterprise, it would be an easy task to show that it only requires a slight impulse for its realization in all that portion of the hemisphere lying north of Panama. In fact, the distance of 2,187 miles from New York to Laredo on the Mexican frontier, that of 839 miles from Laredo to the City of Mexico, and that of 343 miles from the latter city to Oaxaca is covered by railroad lines now in actual operation.

There are at the present time two Mexican railways that approach the Guatemala frontier, one of which runs from Pueblo to Oaxaca on the Pacific slope, and which would require an extension of 400 miles in order to reach said frontier; and the other which extends from Cordoba, a town situated on the line of the Veracruz Railway on the mountain range that slopes toward the Gulf of Mexico. In addition to the lines mentioned there are other railroads in course of construction that will connect with the Interoceanic Railroad of the Isthmus of Tehuantepec, and, what seems to be of still greater importance in this connection, the Mexican Government has granted a concession carrying with it liberal subsidies for the construction, within a period of two years, of a railway which, starting from the Isthmus as a branch of the Interoceanic Railway referred to, will extend to the boundary line of Guatemala.

This new development of railways in Mexican territory having been accomplished, the greatest of the difficulties in extending the Intercontinental Railroad will have been overcome by connecting the railway lines of the Central American States, several sections of which can be utilized for the main line.

It will be sufficient to observe in this connection that of the 1,107 miles that a route on the Pacific side will have to cover in Central America from the Mexican to the Colombian frontier there are now constructed and in operation 211.3 miles of track, particularly in Salvador and Nicaragua, where the longest railroad lines follow in the greater part of their course a direction generally parallel to that of the coast.

In Guatemala there is a railroad extending from the port of Ocos to the village of Ayutla near the Mexican frontier, and the lines constructed in this and the other Central American Republics aggregate a little less than 1,000 miles, viz.:

Guatemala.....	342
Salvador.....	132
Honduras.....	50
Nicaragua.....	176
Costa Rica.....	222

*

But in Costa Rica, Guatemala, and Honduras the principal railway lines follow a transverse direction, because they run from the interior to the ports. Nevertheless, branch lines are being constructed in the three countries mentioned which, within a short time, will not only be able to add considerable length to the part of the system already completed, but will also insure in this manner the guaranty of success for an Intercontinental Railway by the consequent increase of traffic that will always result from the greater number of their connections.

Such favorable conditions did not exist in Mexico when the construction of the first railway between the United States and that Republic was projected. The undertaking was not favored by the public, because it was

*Since that time considerable progress has been made in the extension of the railroad lines in Costa Rica, Guatemala, Nicaragua, and Salvador.

The Guatemalan railway to Puerto Barrios, on the Caribbean Sea, runs so near the Salvadorean frontier that very soon the two countries will connect their lines, thus aiding in a most substantial way the progress of the Central American railway.

thought that it would not be profitable, and to-day—twenty years having scarcely elapsed—there are three railway lines in constant operation, fed by the growing commerce between the two nations. These iron highways, as a natural consequence, promote the mutual development of interests, and encourage at the same time the construction of other railways with which they will connect. There is, then, no reason to doubt, in view of these premises, which are palpable facts, that the extension of railways to the south will produce equally as good, if not better, results to capital, exclusive of the beneficent moral influence they will exert on the future of the nations of this continent.

The realization of the plan for uniting the two great oceans by a canal across the Central American isthmus between Costa Rica and Nicaragua seems near at hand, and if, as it is reasonable to hope, the execution of the same is speedily decided upon, the northern section of the Intercontinental Railway will thereby greatly increase in importance.

At the Second International Conference held in Mexico from October, 1901, to January, 1902, it was resolved to ratify the resolutions of the First Conference, held in Washington, and to recommend, among other things, that the Government of the United States of America initiate, by means of the diplomatic representatives of the American Republics accredited in Washington, the measures most appropriate for the sending, within a year, of commissioners to report upon the railways already completed, and the concessions that the respective Governments will grant for the construction of a continental railway.

At the present time this idea is greatly favored, and it can be expected that with a new impulse it will soon become an accomplished fact.

May it be so for the welfare of the American Republics.
WASHINGTON D. C., *April*, 1902

DEDICATED
TO THE MEMORY OF

DON GUILLERMO NANNE

AS THE

PATHFINDER OF THE CENTRAL AMERICAN RAILWAYS
AND TO HIS NOBLE CHARACTER

OUR DUTY TOWARDS CENTRAL AMERICA.

At every recurring family quarrel taking place regularly within relatively short periods among our Central American friends and neighbors, the question "What is to be done with Central America?" presents itself to the average observant, thinking American, and no satisfactory solution of the problem can be found in any utterings of the country's press.

To be sure, a Central American Union or Confederation suggests itself immediately, in considering the question, as the only rational remedy to be sought to apply. There is no dispute about the correctness of this; every one admits it, even the Central American, be he a dweller in Guatemala or Costa Rica, in Salvador, Nicaragua or Honduras. Yes, it is safe to assume that the highly patriotic desire to bring about such a confederation has been the secret driving spring of many of the fraternal conflicts which have been witnessed for the last seventy-five years.

Why, then, do the many attempts to establish a Central American Union prove such abortive failures?

It is because they have their origin in the ambitious spirit of some particular, limited locality, for the complete domination of the whole; the other localities resent this and the result is strife and ultimate failure. It is because the proper foundation is lacking whereon a Union edifice may be constructed and rest secure against the undermining influences of local dissensions. This, then, is the first duty of the architect who would undertake to construct a Union out of the five separate commonwealths in Central America.

It is the object of this paper to point out how such a foundation may be constructed on lines which are in

keeping with the traditions and avowed policy of the United States Government.

There is nothing new in the proposition; in fact, the ground has already been cleared and the outlines of the foundation traced out, and even the excavation for it started by one of the foremost architects of his time in that line, the late Hon. James G. Blaine.

It is entirely proper, and the present time a fitting opportunity for the constructive activity of our administration at Washington, that this work of laying the foundation for a Central American Union be resumed and brought to completion.

There can be no question that the establishment of a "Community of Interest" among the five commonwealths of Central America, something which is tangible to the paramount interest of each and every one of them, would offer the best foundation possible for a Union.

It is only necessary to point to the project of an Intercontinental Railway to see how readily in connection therewith such a "Community of Interest" may be established. A line of railways constructed on the location of the Intercontinental Railway project extending from Mexico through Central America, having for its southern terminal the City of Panama, would establish an all-rail communication from the United States to the Panama Canal; certainly a desirable line to have from whatever standpoint it may be contemplated. And if this railway line is controlled by one corporation (American), in the management of which each one of the five Central American commonwealths would have an active interest, it would certainly form a naturally broad and firm foundation on which the Confederation would surely grow up spontaneously and rest securely for all time to come. It would not only establish a community of interest among the Central American Republics, but it would include in this community the United States and Mexico as well.

A practical line and method of procedure for the accomplishment of the object in view is suggested in the several paragraphs following:

First. A company to be organized under the laws of the United States for the purpose of establishing a through rail communication from the southern boundary line of Mexico across the countries of Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and part of Panama to the City of the same name.

Second. The company to recognize and accept as the guiding spirit in shaping its policy the general principles recommended by the Committee on Railway Communications in their report to the International American Conference, and accepted by that body at a meeting held in the city of Washington on the 26th day of February, 1890.

These general principles, as far as they represent a living force, are for convenience sake here reproduced as follows:

“1st. That a railroad connecting all or a majority of the nations represented in this conference will contribute greatly to the development of cordial relations between said nations and the growth of their material interests.

* * * * *

“5th. That the railroad, in so far as the common interest will permit, should connect the principal cities lying in the vicinity of its route.

“6th. That if the general direction of the line cannot be altered without great inconvenience, for the purpose mentioned in the preceding article, branch lines should be surveyed to connect those cities with the main line.

“7th. That for the purpose of reducing the cost of the enterprise, existing railways should be utilized as far as practicable and compatible with the route and conditions of the Continental Railroad.

"8th. That in case the results of the survey demonstrate the practicability and advisability of the railroad, proposals for the construction either of the whole line or sections thereof should be solicited.

"9th. That the construction, management and operation of the line should be at the expense of the concessionaires, or of the persons to whom they sublet the work, or transfer their rights with all due formalities, the consent of the respective Governments being first obtained.

"10th. That all materials necessary for the construction and operation of the railroad should be exempt from import duties, subject to such regulations as may be necessary to prevent the abuse of this privilege.

"11th. That all personal and real property of the railroad employed in its construction and operation should be exempt from all taxation, either national, provincial (state), or municipal.

"12th. That the execution of a work of such magnitude deserves to be further encouraged by subsidies, grant of land, or guarantees or a minimum of interest.

* * * * *

"14th. That the railroad should be declared forever neutral for the purpose of securing freedom of traffic.

"15th. That the approval of the surveys, the terms of the proposals, the protection of the concessionaires, the inspection of the road, the legislation affecting it, the neutrality of the road, and the free passage of merchandise in transit, should be (in the event contemplated by Article 8th), the subject of special agreement between all the nations interested."

(Articles Nos. 2, 3, 4, 13 and 16 are omitted in the above for the reason that the object to which they refer, *i. e.*, the preliminary surveys, has been carried out and accomplished, which makes them at this date a dead letter.)

Third: The company to acquire control, either by lease or purchase, of all such existing railway lines which

will become parts of the main trunk line of the Inter-continental Railway.

Fourth: The company to construct such additional new parts of the proposed railway system as are necessary for the accomplishment of the object in view. The surveys heretofore made under the direction of the Inter-continental Railway Commission to form the basis for future operations in this direction.

Fifth: The Governments of the countries named in Paragraph No. 1 to grant the necessary and usual concessions to the Railway Company, embodying the free right of way through public lands, for the construction of the new parts of the railway through their respective territories.

Sixth: The said Governments to give further material aid for the construction of such new lines in the shape of subsidies and grants of land; in return for which the Railway Company to issue in favor of each corresponding Government a proportionate amount of its capital stock, all as may be mutually agreed upon.

Seventh: The Government of the United States to assure the prompt carrying through of the enterprise by guaranteeing a reasonable minimum of interest on the capital invested in the enterprise.

Eighth: Each of the aforesaid Governments to have the right to name one representative in the Board of Directors of the Railway Company. Such representative to receive a fixed annual salary to enable them to make their residence within easy access of the place of meeting.

Ninth: The principal office of the Railway Company to be located in the United States at a point in accordance with the requirements of its charter.

A Vice-President of the Railway Company, who shall also be the General Manager, to have offices and residence at some convenient city in Central America, with sub-offices at the seat of Government of each of the countries traversed by the railway.

Tenth: The initial steps for the enlistment of the co-operation of all the countries interested in the realization of the project, should be taken jointly by the Government of the United States and that of Mexico.

To show the financial requirements for the realization of the project, the following table, furnishing certain data taken from the Reports of the Intercontinental Railway Commission, is given:

INTERCONTINENTAL RAILWAY—CENTRAL AMERICAN DIVISION

Location.	Miles built.	Miles to be built.	Cost for Grad- ing, Masonry and Bridges.	Average cost per mile.
Across Guatemala:				
Ayutla to Caballo Blanco.....	.....	26.2	\$324,518	\$12,386
Caballo Blanco to Santa Maria.....	84.1	.....	.....	.....
Santa Maria to Rio Paz.....	.....	60.5	893,536	14,769
Total.....	84.1	86.7	\$1,228,054	14,164
Across Salvador:				
Rio Paz to near Acajutla.....	.....	26.5	255,196	9,630
Near Acajutla to San Salvador.....	64.0	.....	.....	.....
San Salvador to San Vicente.....	.....	42.2	1,157,433	51,124
San Vicente to San Miguel.....	.....	62.0	793,104	12,792
San Miguel to Rio Guascoran.....	.....	36.1	781,901	21,659
Total.....	64.0	166.8	\$3,987,634	23,907
Across Honduras:				
Rio Guascoran to Rio Negro.....	.....	71.7	1,108,697	15,463
Across Nicaragua:				
Rio Negro to Chinandega.....	.....	38.0	598,960	15,762
Chinandega to Granada.....	103.4	.....	.....	.....
Granada to Peña Blanca.....	.....	68.3	907,390	13,285
Total.....	103.4	106.3	\$1 506,350	14,170
Across Costa Rica:				
Peña Blanca to Liberia.....	.....	52.5	1,167,430	22,237
Liberia to Boca Savegre.....	.....	157.5	3,820,000	24,254
Boca Savegre to Rio Golfito.....	.....	150.0	3,353,487	22,356
Total.....	.....	360.0	\$8,340,917	23,169
Across part of Panama:				
Rio Golfito to David.....	.....	59.6	955,353	16,029
David to City of Panama.....	.....	274.4	4,657,280	17,009
Total.....	.....	334.0	\$5,612,633	16,804
	251.5	1,125.5	\$20,784,285	18,467

By deductions from the data in the table the salient features of the project will appear as follows:

Total length of railway line from the southern boundary of Mexico to the City of Panama will be 1,377 miles, of which 251.5 have been built and 1,125.5 are to be built.

The cost of the new construction of the railway line is estimated by the Commission's engineers for grading, masonry and bridges at \$18,467.00 per mile. This figure should be augmented by about $12\frac{1}{2}$ per cent. to cover contingent, engineering and administrative expenses, which would bring the average cost in round numbers to \$21,000.00 per mile.

Adding for cost of superstructure, full equipment, and rolling stock the sum of \$19,000.00 per mile, we get the entire cost of the new construction to be \$40,000.00 per mile.

The total cost of the project will then be as follows:

1125.5 miles new construction at \$40,000.....	\$45,020,000.00
130 miles of sidings at \$20,000.....	2,600,000.00
Widening the gauge of present constructed lines to standard gauge,	
251.5 miles at \$10,000.....	2,515,000.00
Total cost of main line.....	\$50,135,000.00

In addition, two branch lines should have to be constructed, one in Honduras to connect with the capital, Comayagua, length 75 miles, and the other in Costa Rica to connect with the existing railway line at Alajuela, which connects with the capital, San Jose, the length of which will be about 25 miles, making in the aggregate 100 miles more.* The construction of these branch lines would have to be estimated at an average cost of \$65,000 per mile, owing to the more difficult character of the country encountered in ascending the slopes of the moun-

* As regards Costa Rica, it is to be observed that the construction of the railroad from San José, the Capital, to Puntarenas, on the Pacific coast, is now almost finished, and that in a few months traffic will be opened thereat, thus completing the Costa Rican Interoceanic Railway between said port of Puntarenas and Port Limón, on the Caribbean Sea.—J. B. C.

tain plateaus on which these cities are located. This will swell the total amount of capital required, in round numbers, to \$56,000,000.00.

The Pacific slope of Central America embraces within its confines some of the best and richest agricultural lands of the Continent north of the Isthmus of Panama. It is here where most of the coffee, sugar-cane and cocoa plantations of the Central American countries are located; where these products are grown to the greatest perfection. It is here where the fountain of all wealth of these countries is located. This "Coffee Zone," as it is generally known, occupies the Pacific slope of Cordilleras between elevations of 1,000 to 5,000 feet above sea level. It reaches its greatest width and unbroken continuity through the western part of Guatemala, where the belt is about 70 miles wide, extending well into the Mexican State of Chiapas. Through the eastern part of Guatemala, Salvador, Honduras, Nicaragua and Costa Rica, the belt which diminishes and varies in width is less continuous, somewhat broken by outrunners from the Cordilleras, which show more of an arid character; however its many valleys possess all the richness of soil and climate of the "Costa Cuca" in western Guatemala. It is through this Zone or rather at the foot of which the proposed railway line has been located by the Intercontinental Railway Commission. With the intercommunication which this line would afford throughout the length of this Zone, there is sufficient traffic in sight from local sources (short haul freight and passengers) to sustain the life of the railway with decided healthful vigor from the very start, leaving alone any through traffic which will surely more or less develop from the United States and Mexico to the Canal Zone. The further development of the great natural resources, not only of the "Coffee Zone," but of the whole Central American territory, which will surely follow the opening of this line, will insure its prosperity in the near future beyond adventure.

More, the Intercontinental Railway of Central America will be the key to unlock the gates of the hidden treasure house, which nature has so lavishly provided with the products of a most favored zone.

In conclusion, the writer would touch upon another feature, inherent to the project and capable of being developed into an exceedingly strong characteristic of the undertaking.

It is this: The line of the projected railway lies along the foot of the Pacific slope of the Central American Cordilleras. In its course it traverses numerous streams which are fed from the high plateaus of the Cordilleras. The more important of these streams which are crossed at short intervals will furnish an abundance of electric power, not only sufficient to operate all railroads existing and to come, but to furnish light and power for every conceivable and needful purpose in these countries.

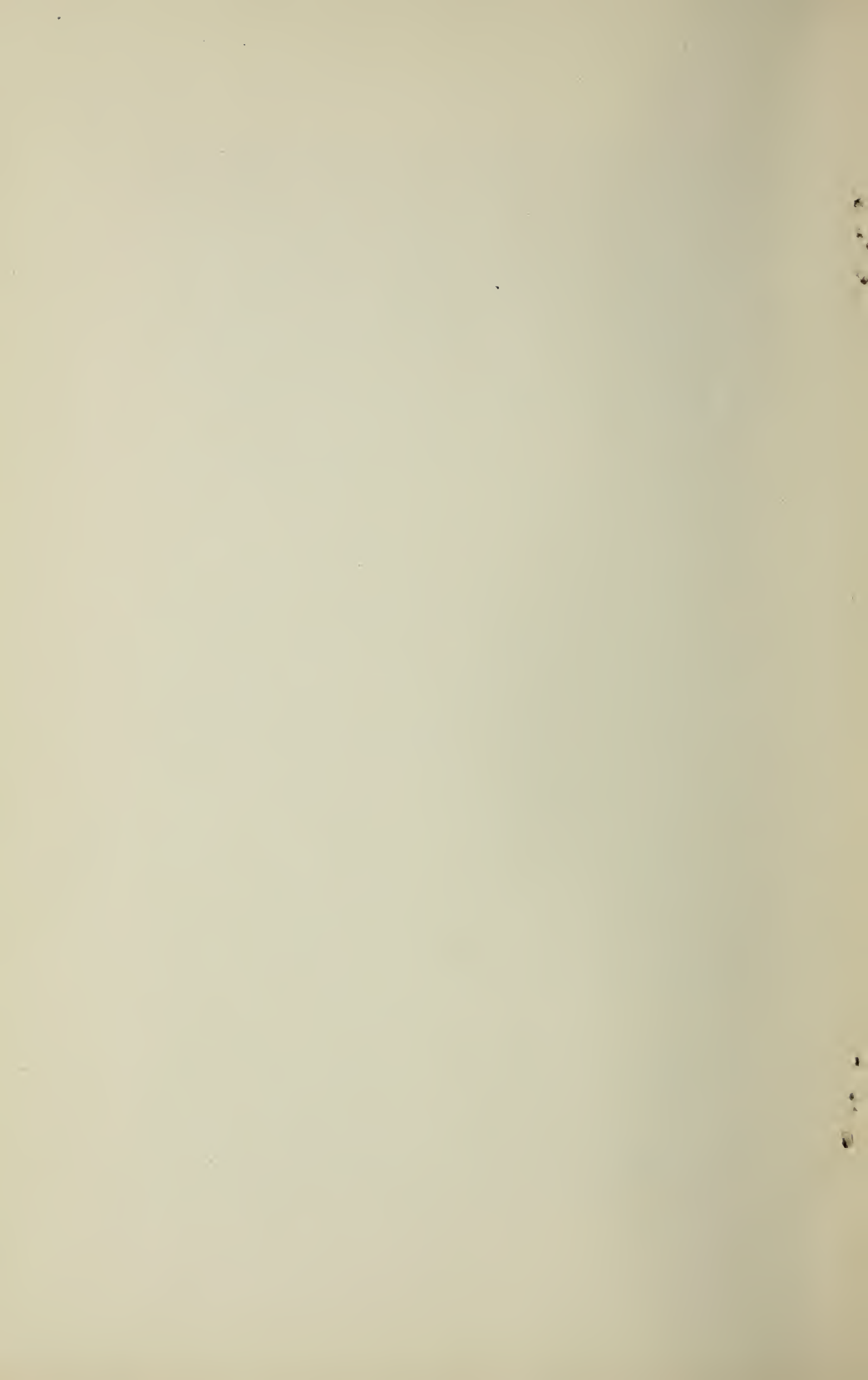
From the moment that a company composed of the right elements for the purpose in view is organized and negotiations begun, all fraternal strife between the five Central American Republics would cease, their attentions would be directed by their larger sisters of the north to a rising dawn, promising to shed its golden light in common over all. During the construction of the road their surplus energy would be attracted and employed in a work of common interest to all. At the conclusion of the work and the opening of the road there will be general manifestations of congratulations and good cheer and good will towards each other. Once the railway line as a whole is in active operation, the practical unification would be an accomplished fact.

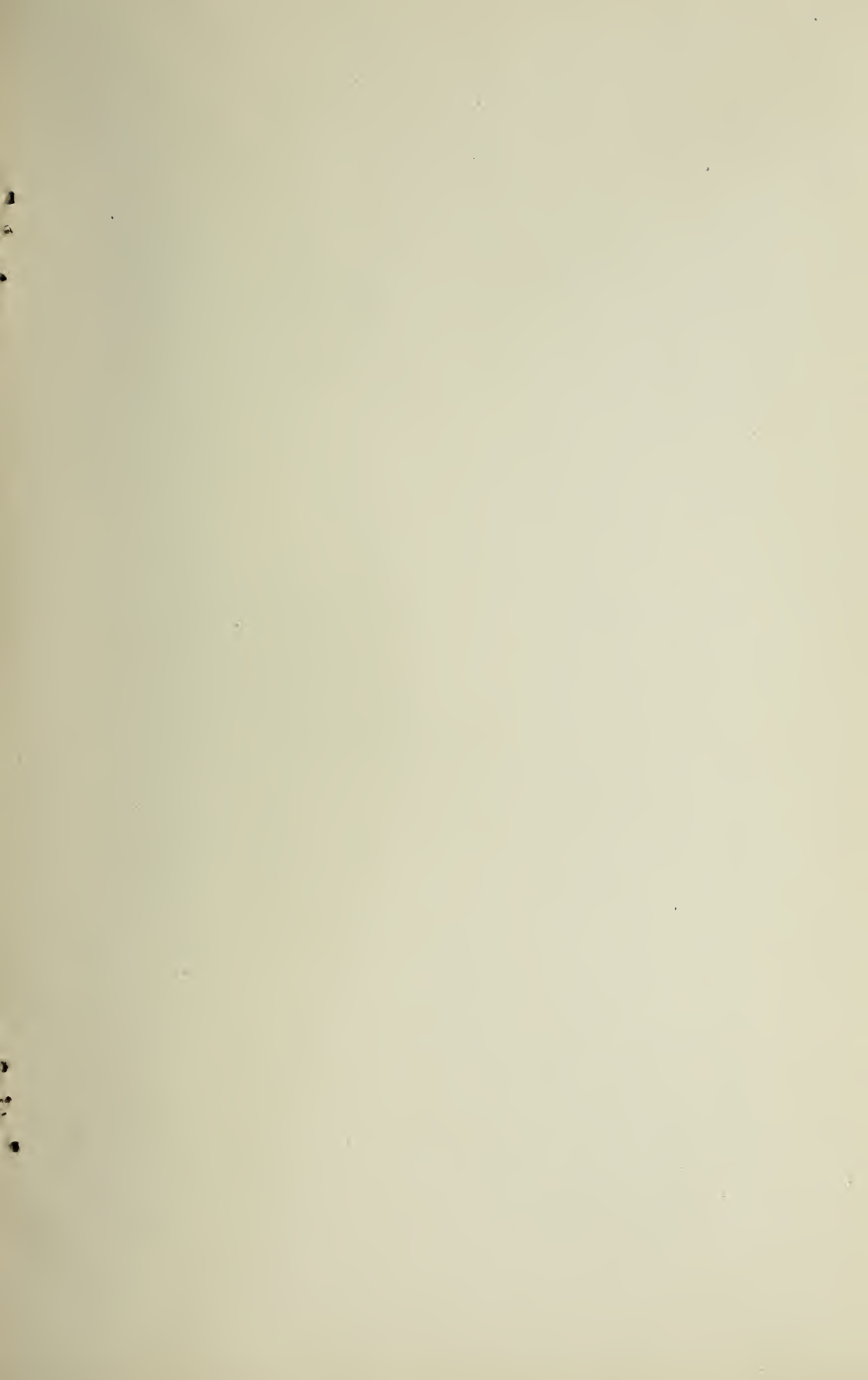
The steel rails of such a line would indeed be veritable bands of steel holding together with an unremitting grip the five Central American States into one of Unity, as compared with the fasciated bundle of slender rods with the battle axe, popularly accepted as the emblem of the ancient device of "*In Union there is strength.*"

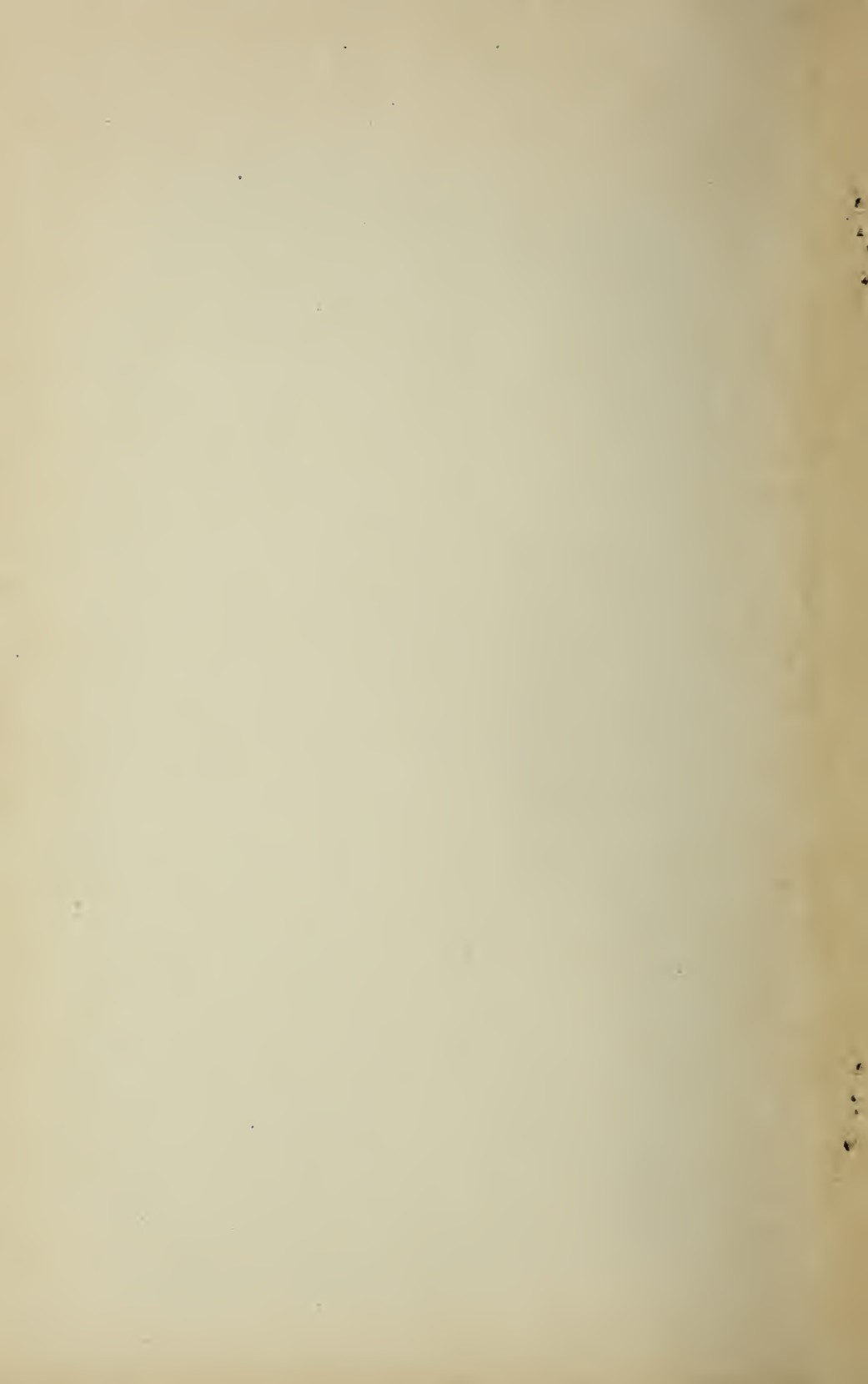
Our own interest at Panama, in opening new and extending old trade channels in the existence of peaceful and stable conditions in Central America, combined with our duty towards common humanity, demands that the construction of this first section of the Intercontinental Railway be taken in hand at once. The present time seems opportune indeed for the initial move for the accomplishment of the project; its realization would certainly write another chapter in the history of practical achievements towards the goal of Pan-Americanism.

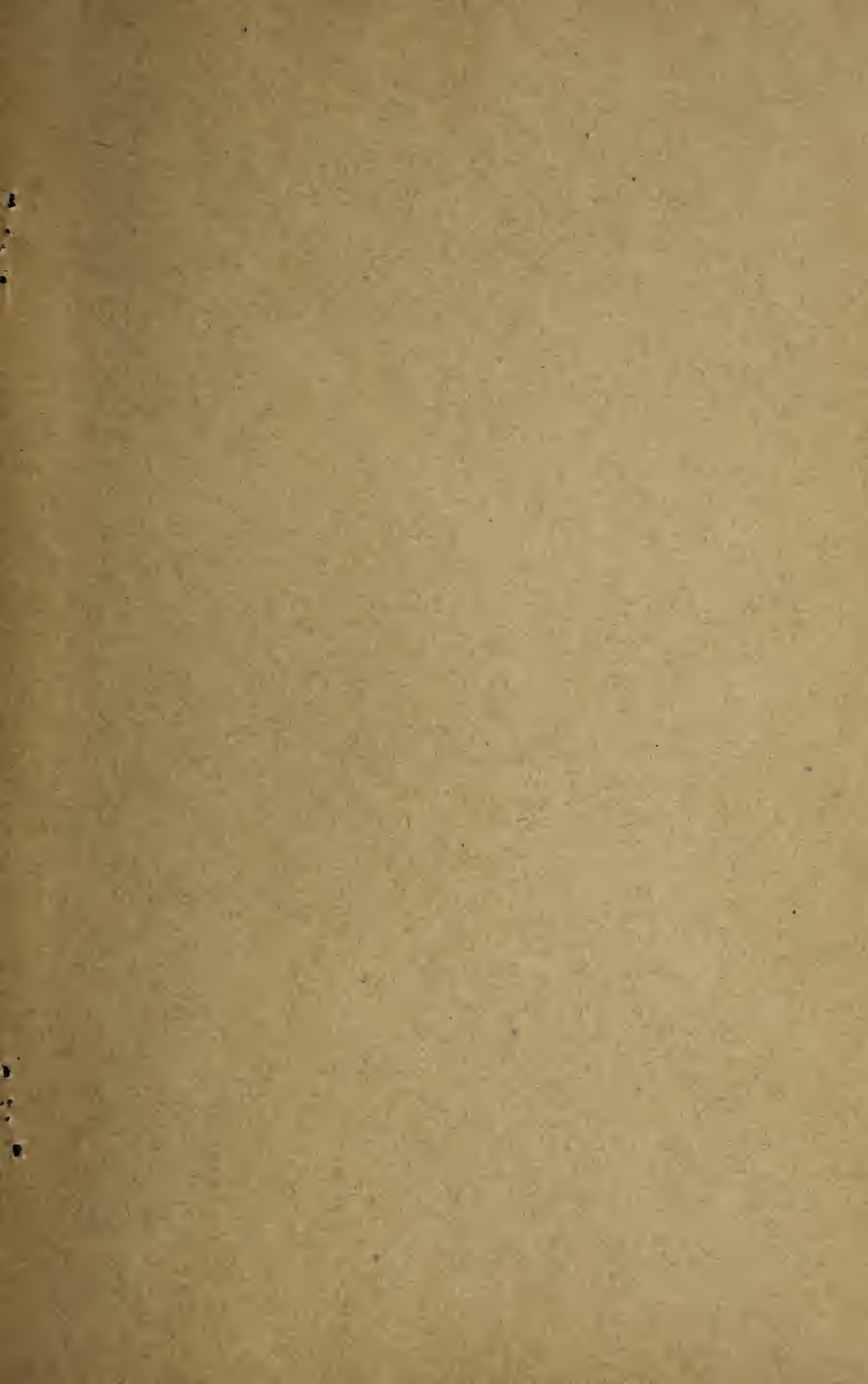
THEODORE PASCHKE,
M. A. Soc. C. E.

NEW YORK, *April*, 1907.











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